

KOROTKOV, V. S.

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Ot, uska rabochikh i sluzhashchikh V. SSSR (Vacations for Workers and Employers in USSR, by) M. Yu. Gol'dshteyn i V. S. Korotkov. Moskva, Gosyurizdat, 1956.

76 l. Tables.

Bibliographical Footnotes.

OR

KOROTKOV, VLADIMIR STEPANOVICH

GOL'DSHTEYN, Mark Yur'yevich; KOROTKOV, Vladimir Stepanovich; NOVOSPASSKIY,
V.V., red.; RAKOV, S. I., tekhn. red.

[Guaranteed and compensatory payments to workers and employees]
Garantii nye i kompensatsionnye vyplaty rabochim i slushashchim.
[Moskva] Izd-vo VTSiS Profizdat, 1957. 92 p. (MIRA 11:2)
(Wages)

GOL'DSHTEYN, Mark Yul'yevich: KOROTKOV, Vladimir Stepanovich:
BODERSKOVA, N.N., red.; SHCHEDRINA, N.L.

[Work and rest time of workers and employees in the U.S.S.R.]
Rabochee vremia i vremia otdykha rabochikh i sluzhashchikh v
SSSR. Moskva, Gos.izd-vo iurid.lit-ry, 1959. 84 p.

(Hours of labor)

(Vacations, Employee)

(MIRA 12:11)

KOROTKOV, V.S.

Vacations for workers and office workers right to vacations.
Okhr.truda i sots.strakh. no.7:73-74 J1 '59.

(MIRA 12:11)

(Vacations, Employee)

GOL'DSHTEYN, Mark Yul'yevich; KOROTKOV, Vladimir Stepanovich; ZHELUDKOV,
A.A., red.; GOLICHENKOVA, A.A., tekhn.red.

[Guaranteed and compensatory payments to workers and employees]
Garantiinye i kompensatsionnye vyplaty rabochim i sluzhashchim.
Izd.2., ispr. i dop. Moskva, Izd-vo VTsSPS Profizdat, 1960.
116 p. (MIRA 13:12)

(Wages)

KOSTIN, K.: KOROTKOV, V. S.

Questions and answers. Okhr.truda i sots.strakh. 3 no.3:67-68
Mr '60. (MIRA 13:7)
(Women--Employment)
(Employees, Dismissal of)

KOROTKOV, Vladim Stepanovich; GLEBOVA, R.G., red.; KHLOPOVA, L.K.,
tekh. red.

[Benefits for youths working in enterprises and institutions]
L'goty podrostkam, rabotaiushchim na predpriatiakh i v uch-
rezhdeniakh. Moskva, Gosizdat, 1962. 66 p.

(Youth—Employment)

(MIRA 16:2)

OGOLEV, N.P.; ISAYEV, K.M.; MIKHALYAK, Ya.S., kand. yurid. nauk;
VOLKOV, M.I., kand. ekoh. nauk; KOROTKOV, V.S.;
LYUBIMOV, S.P., red.; KOROBOVA, N.D., ~~ekhn.~~ red.

[Trade-union group organizer's companion] ~~Sputnik profgruppa...~~
[By] N.P.Ogolev i dr. Moskva, Profizdat, 1962. 288 p.

(MIRA 16:10)

(Trade union ~~...~~ Handbooks, manuals, etc.)

Korotkov, V.S.

USSR /Chemical Technology. Chemical Products
and Their Application

I-31

Fermentation industry

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32903

Author : Korotkov V.S.

Title : Grape Processing at the Anapa Wine Factory

Orig Pub: Vinodeliye i vinogradarstvo SSSR, 1956, No 4,
6-9

Abstract: Description of the technological system of equip-
ment distribution at a primary wine-producing
factory. A description and a diagram are given
of a continuous operation, gravity-discharge
strainer, designed by Chukashev and Kudrin, of
greater output capacity than the basket strain-
ers but yielding a more turbid must.

Card 1/1

Korotkov, V.S.

MALYSHKIN, K.N. & KOROTKOV, V.S.

Pilot plant production of chemical woodpulp. Bum.prom. 32 no.3:13-
17 Mr '57. (MIRA 10:4)

1. Svetogorskiy tsellyulozno-bumashnyy kombinat.
(Woodpulp)

KOROTKOV, V.S.
MALYSHKIN, K.N.; KOROTKOV, V.S.

Production of chemical pulp. *Bum. prom.* 32 no.10:13-17 0 '57.

(MIRA 11:1)

1. Svetogorskiy tsellyulozno-bumashnyy kombinat.
(Woodpulp)

KOROTKOV, V.S., inzh.; TRET'YAKOVA, V.Yu., inzh.

Producing semichemical and chemical woodpulp from birch chips.
Bum. prom. 33 no.2:14-17 P '58. (MIRA 11:3)

1. Nachal'nik eksperimental'nogo tsakha Svetogorskogo tsellyulozno-bumazhnogo kombinata (for Korotkov). 2. Nachal'nik issledovatel'skoy laboratorii Svetogorskogo tsellyulozno-bumazhnogo kombinata (for Tret'yakova).

(Woodpulp) (Birch)

MALYSEKIN, K.N.; KOROTKOV, V.S., inzh.

Manufacture of menasulfite semichemical pulp and chemical
pulp from aspen chips. Bum. prom. 33 no. 6:15-17 Je '58. (MIRA 11:7)

1. Glavnyy inzhener Svetogorskogo tsellyulozno-bumashnogo kombinata.
(Aspen)
(Woodpulp)

KOROTKOV, V.S.

Chemiground wood from chips of coniferous woods. Bum.prom. 35 no.11:
18-20 N '60. (MIRA 13:11)

1. Glavnyy inzhener Suoyarvskogo kartonnogo i domostroitel'nogo
kombinata.

(Suoyarvi--Woodpulp)

KOROTKOV, V.V., inzh. (Tashkent)

Optical instruments for trackwork. Put' 1 put. khoz. 9 no.11:
20-21 '65. (MIRA 18:11)

KOROTKOV, V. V., inzh. (Tashkent)

Use of long welded rail lengths for station tracks. Put' i put.
khoz. 6 no.9:9-11 '62. (MIRA 15:10)

(Railroads--Track)

ALEKSANDROV, K.K.; KOROTKOV, V.V., starshiy prepodavatel';
TARSIN, V.P., assistant (Tashkent)

Need for urgent measures. Put' 1 put, khoz. 8 no.1:40 '64.
(MIRA 17:2)

1. Glavnyy inzh. sluzhby puti Sredneaziatskoy dorogi,
Tashkent (for Aleksandrov). 2. Tashkentskiy institut inzhenerov zheleznodorozhnogo transporta (for Korotkov).

ACC NR: AP7002544 (A,N) SOURCE CODE: UR/0413/66/000/023/0019/0019

INVENTOR: Popov, A. F.; Korneyev, N. N.; Korotkov, Ye. N.; Zhigach, A. F.; Rybakova, L. A.; Zakharov, G. S.; Kuritsyn, V. A.; Krol', V. A.; Lebedev, S. I.; Rabotnov, V. V.; Solov'yev, V. V.

ORG: none

TITLE: Preparative method for alkylaluminums. Class 12, No. 188973

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 19

TOPIC TAGS: alkylaluminum, chemical synthesis, aluminum compound,
HYDROCARBON

ABSTRACT: An Author Certificate has been issued for a method of preparing alkylaluminums. The method involves the reaction of aluminum with hydrogen and olefins in the presence of trialkylaluminum and of a halide of a group IV or V metal.

[W. A. 77]

[BO]

SUB CODE: 07/ SUBM DATE: 18Apr64

Card 1/1

UDC: 547.256.2.07

L 17712-66 EWP(j)/EWT(m) RM/WW

ACC NR: AP6006312

SOURCE CODE: UR/0413/66/000/002/0027/0027

AUTHOR: Korneyev, N.N.; Zhigach, A.F.; Kost, M. Ye.; Korotkov, Ye. N.

ORG: none

TITLE: Method of preparing triethylaluminum 7.44.55 29

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no.2, 1966, 27
Class 12, No. 177884

TOPIC TAGS: organic chemistry, cerium, neodymium, catalyst specific reaction

ABSTRACT: A method of preparing triethylaluminum by direct synthesis via formation of diethylaluminum hydride in the presence of a hydrogenation catalyst is presented; it is distinguished by the use of lanthanides, such as lanthanum, cerium, neodymium, or their hydrides as catalysts, for the purpose of increasing the rate of hydrogenation and the efficiency of the process. [11]

SUB CODE: 07 / SUBM DATE: 12 May 63 / ATD PRESS: 4210

Card 1/1 nst

UDC: 547.212'256.2.05

KOROTKOV, Ye.P.
KOROTKOV, Ye.P. (Kaunas)

Better arrangement of figures on the 48-meter steel tape measure.

Geod. i kart. no. 8:76 Ag '57.

(MIRA 10:10)

(Measuring--Tapes)

KOROTKOV, Ye.V.

Secondary technical personnel. Nauka i pered.op.v sel'khoz.7 no.1:
77-78 Ja '57. (MLBA 10:2)

1. Direktor Glasunovskogo tekhnikuma, Orlovskaya oblast'.
(Agricultural education)

KOROTKOV, Yu.

Grand program for the building up of communism in the U.S.S.R.
Voen. znani. 35 no.2:4-5 F '59. (MIRA 12:6)
(Russia--Economic policy)

KIM, M.; LAVROV, P.; KOROTKOV, Yu.; KOLOMEYTSSEV, L.

Pile foundations in permafrost. Stroitel' 8 no.11:3-4, 4. of cover
N '62. (MIRA 16:1)

(Piling (Civil engineering)) (Frozen ground)

KOROIKOV, YULIA

24(6) PULSE 1 BOOK EXPLORATION SOV/3501
Akademicheskii SSSR. Energeticheskii Institut
Voprosy teploobmena (Heat-Exchange Problems) Moscow, 1959. 237 p. Errata slip
inserted. 2,800 copies printed.
Resp. Ed.: M.A. Mikheyev, Academician Ed. of Publishing House: O.B. Gorbunov;
Tech. Ed.: I.P. Kuznetsov.
PURPOSE: This collection of articles is intended for scientific workers, engineers,
and postgraduate students specializing in thermodynamics.

CONTENTS: The collection reviews problems of heat transfer and explores possibilities
of intensifying heat exchange. The heat exchange theory is outlined, and
Russian scientists who contributed to its development are mentioned. Thermophysical
properties of some molten metals and alloys are analyzed, and methods
used to determine them are presented. The collection also contains articles on
activity, heat capacity, and kinetic viscosity of these metals are discussed. Results
of experimental study of the intensification of heat exchange for a water flow in
small diameter tubes are analyzed and the instruments used along with the pilot
plant for studying convection heat exchange in contacting nonmiscible fluids are
described. Instruments and equipment used for determining the linear expansion
of metals, the consumption of a liquid, and the absorption capacity of a surface
are also described and illustrated. A number of equations for solving various
thermodynamic problems are presented. Each article is accompanied by references,
the majority of which are Soviet.

TABLE OF CONTENTS:

Editorial Foreword	3
Mikheyev, M.A. Development of the Science of Heat Exchange During the Last Forty Years	5
Mikhailov, M.A., E.A. Salakhutdinov, I.M. Pechkin, I.V. Klassen, and I.A. Votchkina. Thermophysical Properties of Some Molten Metals and Alloys	11
Pechkin, I.M. Heat Capacity of Molten Metals	46
Sidorov, E.A. Radiation and Convection Heat Exchange in an Absorbing Medium	49
Polynskiy, O.S. Intensification of Heat Exchange for the Flow of Water in an Annular Channel	53
Borukhin, Y.M., and G.S. Polynskiy. Convection Heat Exchange in a Direct Con- tact of Immiscible Fluids	67
Kirillov, E.L., V.I. Subbotin, M.Ye. Surkov, and M.P. Troynov. Study of Heat Transfer to Sodium-Potassium Alloy in a Pipe	80
Kondratyuk, M.S. Average Heat Transfer for a Turbulent Flow of Eutectic Bismuth - Lead Alloy in Short Pipes	96
Ivanovskiy, M.M. Accelerated Method for Determining the Coefficient of Average Heat Transfer in a Pipe	100
Adrianov, V.M. Application of Electrodynamics to the Solution of Problems of Radiant Heat Exchange	113
Leitman, V.M., and B.V. Dyubchik. Heat Transmission From a Wall to a Turbu- lent Air Flow in a Pipe and the Hydraulic Resistance at High-Temperature Pres- sure Heads	123
Mikhailov, M.A., V.I. Subbotin, P.A. Shukhov, and A.A. Sholokhov. Utilization of a Microthermocouple in Studying Heat Transfer	193
Kamshinov, Yu.A. Unit for Metallization Carried out by Sublimation of Metals in a Vacuum	202
Korotkov, Yu.A. Instrument for Measuring the Consumption of a Liquid	208
Bulayev, B.I. Distribution of Velocity and Temperature for a Turbulent Liquid Flow in a Circular Pipe	208
Khrustalov, B.A. Instrument for Determining the Absorption Capacity of a Surface	233

KOROTKOV, YU. P.

RESEARCH INTO THE NATURE AND SPECTRA
OF PARTICLES PRODUCED BY HIGH ENERGY
NUCLEONS

A. I. Alikhanov, A. V. Khrimyan, V. K. Kosmachevsky, V. L. Avakyan,
K. S. Egiyan, Yu. P. Korotkov, N. A. Nalbandyan

The nature and the momentum spectra of secondary particles produced in lead by fast cosmic nucleons were studied at an altitude of 3,250 m. above sea level by means of a magnetic mass-spectrometer, five-layer proportional counter and five-layer scintillation counter.

The momentum spectra of π^- -mesons, K-mesons, protons and neutrons, generated by the charged and neutral components of cosmic radiation, are presented.

The spectra of π^+ - mesons produced by neutrons do not differ from the spectra of π^- - mesons produced by fast charged particles. The N^+/N^- ratio for π^- -mesons generated by protons differs from that for π^- -mesons generated by neutrons.

Among the products of stars with momenta up to 720 Mev/c, the number of K-mesons is of the order of 10% of the π^- -mesons. In the 720 - 1,000 Mev/c range $N_K/N_p > 0.2$.

Data are presented on the number of neutrons and protons of different energies in cosmic radiation flux at an altitude of 3,250 metres above sea level.

Report presented at the International Cosmic Ray Conference, Moscow, 6-11 July 1959.

KOROTKOV, Yu. S.

KOROTKOV, Yu. S.: "The effect of the methods of preparing seedlings on the growth and fruit yield of strawberries under the conditions of Moscow Oblast." Moscow Order of Lenin Agriculture Academy imeni K. A. Timiryazev. Moscow, 1956. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN AGRICULTURE SCIENCE).

Knizhnaya letopis',
No. 25, 1956. Moscow.

5(4)

AUTHORS:

Il'yasov, I. I., Mirsayapov, V. N., Korotkov, Yu. V. SOV/78-4-4-34/44

TITLE:

The Ternary System of Sodium, Potassium and Cadmium Bromides
(Troynaya sistema iz bromidov natriya, kaliya i kadmiya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 4, pp 909-912
(USSR)

ABSTRACT:

The system Na, K, Cd // Br was investigated by a visual polythermal method. The binary systems Na_2Br_2 - K_2Br_2 , Na_2Br_2 - CdBr_2 and K_2Br_2 - CdBr_2 were checked, and it was found that in the system K_2Br_2 - CdBr_2 there is only one compound with the composition $\text{KBr} \cdot 2\text{CdBr}_2$. This compound melts incongruently at 360° . Seven internal sections of the ternary system were investigated. The crystallization surface of this system consists of the ranges CdBr_2 , $\text{KBr} \cdot \text{CdBr}_2$ and the solid solutions $[\text{Na}, \text{K}] \text{Br}$, which decompose inside the system above 550° . The internal sections and the melting diagram of the system Na, K, Cd // Br are given in figures 2 and 3. The melting points within the

Card 1/2

SOV/78-4-4-34/44

The Ternary System of Sodium, Potassium and Cadmium Bromides

system $\text{CdBr}_2\text{-K}_2\text{Br}_2$ are contained in a table; the seven internal sections under investigation are characterized in a further table. There are 3 figures, 2 tables, and 6 references, 5 of which are Soviet.

SUBMITTED: December 30, 1957

Card 2/2

KOROTKOV, Yu. V., inzh.

Improved techniques of manufacturing reinforced concrete pipe.
Transp. stroi. 13 no.3:22-23 Mr '63. (MIRA 16:4)

(Pipe, Concrete)

KOROTKOV, Yu.V.

Fastening crane tracks to reinforced concrete beams. Prom.stroi.
41 no.3:37-38 M. '64. (MIRA 17:3)

1. Direktor Tuchkovskogo zavoda zhelezobetonnykh konstruktsiy.

KOROTKOV, Yu.V.

Using high-strength wire for the reinforcement of reinforced-concrete supports of overhead contact systems. Transp. stroi. 15 no.1:26-27 Ja '65. (MLRA 18:3)

1. Direktor Tuchkovskogo zavoda zhelezobetonnykh konstruktsiy.

KOROTKOV, Yu. Ye. F-4

Category : USSR/Magnetism - Ferromagnetism

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1415

Author : Zaychikov, N.N., Zheltenkova, R. M., Kondratova, O. T., Korostylev, A. F.
Korotkov, Yu. Ye., Mashirin, B. I., Myrkin, Yu. N., Parasyuk, L. S.

Title : Investigation of the Effect of the Chemical Composition on Magnetic Properties of Electrotechnical Iron.

Orig Pub : Tr. Mosk. aviats, in-ta, 1956, vyp. 60, 4-12

Abstract : A statistical study was made of the effect of grain size of the micro-structure and of the chemical composition on the value of H_c of Armco iron, using data obtained in regular production shop tests of the melts (Chemical and metallographic data). The correlation coefficient between the value of H_c and the percentage carbon content was found to be $r_{0.1} = 0.301$, and the correlation between H_c and the percentage sulphur contents was $r_{0.1} = 0.372$. H_c increases with increasing contents of C or S. The content of Mn, P, Ml, and Cu, does not exert a noticeable effect on H_c provided its value is within the GOST standard limit. A statistical comparison of the data on the size of the grain of the micro-structure of Armco iron and on H_c disclosed a linear relationship between these quantities, and the correlation coefficient was found to be $r_{0.1} = 0.555$. The maximum

Card : 1/2

Category : USSR/Magnetism - Ferromagnetism

F-4

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 1415

effecton H is exerted by the size of the micro-structure grain.
The value of H_c increases with diminishing grain size. The joint
simultaneous influence of three factors on H of Armco iron is
given by the multiple correlation coefficient

$$R_{0,1,2,3} = \sqrt{0.217r_{0,1} + 0.208r_{0,2} + 0.512r_{0,3}} = 0.663.$$

Card : 2/2

DERYAGIN, B.V.; DUKHIN, S.S.; KOROTKOVA, A.A.

Diffusiophoresis in electrolyte solutions and its role in the mechanism of film formation from rubber latexes by the method of ionic deposition. Koll. zhur. 23 no.1:53-58 Ja-F '61.
(MIRA 17:2)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

KOROTKOVA, A. A.

Chemical Manufacturing Processes

Dissertation: "Investigation of the Process of Preparing Foam Rubber
From Synthetic Latex by Means of Frothing." Cand Chem Sci, Moscow
Inst of Fine Chemical Technology imeni Lomonosov, 15 Mar 54. (Vechernyaya
Moskva, Moscow, 4 Mar 54)

SO: SUM 213, 20 Sept 1954

KOROTKOVA, A.

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V. The rheological properties of stearol. A. Korotkova
and D. Sandomirskij (Sci. Resent. Inst. Rubber Ind.,
Moscow). *Kolloid. Zhur.* 17, 263 (1955) — In an app. (not
described) based on tangential displacement of a plate, glyc-
erol showed non-Newtonian behavior, whereas 60% soln. of
rosin in turpentine was Newtonian. Also in *Colloid J.*
U.S.S.R. 17, 243 (1955) (Engl. translation).
J. J. Bikerman

8m

KOROTKOVA, A.A.; MALKINA, Kh.E.; PUKHOV, A.P.; FOMINA, L.S.

High-frequency drying of latex sponge. Kauch.i rez.16 no.9:9-11
S '57. (MIRA 10:12)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i
Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.
(Foam rubber--Drying) (Induction heating)

SOV/138-58-11-12/14

AUTHORS: Fedyukin, D.L., Zyryanov, B.A. and Korotkova, A.A.

TITLE: Apparatus and Method for Testing Foam Rubber Products as to Hardness (Pribor i metod dlya ispytaniya gubchatykh izaeliy na tverdost')

PERIODICAL: Kauchuk i Rezina, 1958, Nr 11, pp 36 - 37 (USSR)

ABSTRACT: Hardness is measured by the apparatus shown in the illustration by penetration of a steel cylinder 59 mm dia under a load of 1415 g. This gives a specific pressure on the sample of 50 g/cm² which is the average pressure on the seat of a man sitting down. The hardness tester is mounted on a disc 280 mm dia, and the whole unit weights 2.3 kg. The cylinder is held before measurement by the detents so that it is just level with the surface of the foam article. Hardness is expressed as the deflection measured 30 sec after release of the cylinder. Measurement should be made at controlled temperature between 15 and 25 °C. The hardness indicated varies according to the thickness of the specimen and for control testing standard thickness specimens must be used.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy (Research Institute for Rubber and Latex Products)

Card 1/1

S/081/60/000/022/013/016
A005/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 22, p. 516, # 90724

AUTHORS: Korotkova, A. A., Malkina, Kh. E., Pukhov, A. P., Fomina, L. S.

TITLE: Drying of Latex Sponge by Applying High Frequency Currents

PERIODICAL: Tr. N.-1. in-ta resin. i lateksn. izdeliy, 1959, sb. 2, pp. 77-92

TEXT: The authors studied the drying process of the latex sponge by h.f.-currents. The unit for drying the ware consisted of a h.f.-generator, heating electrodes, and measuring instruments. The h.f.-generator with the oscillation power of 1.5 kw was made up with two tubes of the ГК-3000 (GK-3000)-type. The heating electrodes are plates of sheet aluminum of 300 x 200 x 3 mm in size. The test pieces with parallelepiped shape of 150 x 100 x 40 mm in size were heated in the electrical h.f.-field of the planeparallel heating electrodes which had neither thermal nor electric contact with the test pieces. In this way, the removal of the water vapors was promoted which were liberated from the material in the drying process. During the drying process of the sponge at 80°C, its moisture decreases from 55 to 1.2%, the tangent of the dielectric loss angle ($\tan \delta$) decreases from

Card 1/3

S/081/60/000/022/013/016
A005/A001

Drying of Latex Sponge by Applying High Frequency Currents

0.34 to 0.036, and the dielectric constant (ϵ) decreases from 3.95 to 1.84. At the decrease of $\text{tg } \delta$ and ϵ , their values remain in that range in which the sponge is heated further effectively. This change of the electric characteristics favorably affects the quality of the sponge, because it does not allow the overheating of the sponge. In the general case, the electric sponge properties are dependent on the composition of the latex mixture, the porosity of the sponge, and the carefulness of washing off. The better the washing off of the sponge, the higher is the drying process rate. The intensification of the sponge drying by increasing the frequency of the current and the intensity of the electric field is possible up to a definite limit which is due to the decrease in the quality of the sponge at very quick drying. In the drying of a test piece of 40 mm thickness for 6 minutes the rate increases during the first minute, then it reaches a maximum, and after 3 minutes the drying rate is low, and the piece is dried in the main. During the remaining 3 minutes, the moisture content is brought to the ultimate value. The greater the thickness of the test piece, the lower is the drying rate. The temperature of the sponge during the drying process is not constant. If the drying intensity is low, the functional curve of the sponge temperature versus the drying duration passes through a maximum, not exceeding a definite allowable value. At

Card 2/3

SOV/138-59-4-6/2 6

AUTHORS: ~~Korotkova, A.A.~~, Fomina, L.S., Malkina, Kh. E., Pukhov, A.P.

TITLE: A Method of Gelling and Vulcanizing Foamed Articles from Latex (Metod zhelatinirovaniya-vulkanizatsii gubchatykh izdeliy iz lateksa)

PERIODICAL: Kauchuk i Rezina, 1959, Nr 4, pp 19-23 (USSR)

ABSTRACT: Latex foams can be gelled and vulcanized by radio-frequency current in the 10-20 mc/s range, by high-frequency current from machine generators in the 500 to 10,000 c/s range, or at power frequency of 50 c/s. Experiments were made using moulds formed of reinforced rubber with electrode in the base and in the lid of the mould. Standard "Revertex" mixes containing 50% dibutylphthalate plasticizer were used for these tests. Difficulties through corrosion were encountered when working at 50 c/s frequency with the original aluminium electrodes. Tests were made with various electrode materials listed in Table 1 and it was found that stainless steel, mark EYaIT, showed only 0.002% weight loss on a four-hour test at 50 c/s and negligible corrosion with up to 10 or 12 repeat tests of this duration. At higher frequencies the electrode life with this material

Card 1/4

SOV/138-59-4-6/26

A Method of Gelling and Vulcanizing Foamed Articles from Latex

is prolonged indefinitely. The samples first tested were 100 x 100 x 35 mm in dimensions. The resistivity of various Revertex mixes, and of the foam blown from them to 3 times original liquid volume, are given in Table 2. Figure 1 shows change in resistivity with temperature at applied voltages of 5 and 8 volts. Figure 2 shows the current/voltage relationship for a foam extended by a factor of 3.5, and variation of resistance with expansion of the foam is tabulated in Table 3. The resistance of the later mixes and the foams follows Ohm's law, and the resistance increases considerably on foaming. The curve of temperature versus time for electrified intensities of 12.5, 11.0 and 6.2 V/cm are shown in the curves of Figure 3. Experiments were then carried out on specimens 260 x 350 x 40 mm at 50 V (12.5 V/cm) and 25 A initial current on the electrodes. Variation of temperature and current with time is shown in Figure 4. The current was applied for 10 minutes, after which time the temperature reached 130°C. The specimen was left in

Card 2/4

SOV/138-59-4-6/26

A Method of Gelling and Vulcanizing Foamed Articles from Latex

the closed mould for a further 10 minutes and cooled back to 90°C, at which temperature the foamed specimen could be removed from the mould without change of its moulded dimensions. The specific gravity, modulus, permanent deformation on compression, and ageing coefficients of specimens, where heating current was applied for 8, 10 and 12 minutes, are compared in Table 4. Power consumption is estimated at 0.3 to 0.45 kWh per kg of foam (or sponge latex). In order to produce articles such as car seat cushions with cavities in the foam, it is necessary to dispose the electrodes in the projections forming these cavities in strips so that the area of the top and bottom electrodes are equal. Exploratory trials were made on cushions 350 x 260 x 200 mm dimension, loaded at 6 V/cm and with an initial 50 c/s current of 0.014 A/cm². Temperature increased to 130°C after 15 minutes power application, and was allowed to decrease to 95°C after switching off before the mould was opened (30 minutes cooling time). It is suggested that similar methods and cycles could form the basis of a continuous process for

Card 3/4 gelling and vulcanizing foamed latex articles .

SOV/138-59-4-6/26

A Method of Gelling and Vulcanizing Foamed Articles from Latex

There are 4 figures, 4 tables, and 3 English references, which include British patents 677482 (1950) and 654238 (1946).

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (The Scientific-Research Institute for Rubber and Latex Articles and The Scientific-Research Institute of the Tyre Industry)

Card 4/4

-15.9210
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SOV/69-21-6-9/19

AUTHOR: Sandomirskiy, D.M. and Korotkova, A.A.

TITLE: Studies on Latex Foams

PERIODICAL: Kolloidnyy zhurnal, 1959, Vol 21, Nr 6, pp 679-685 (USSR)

ABSTRACT: The present study is devoted to the problem of stability and other properties of latex foams. The authors report on some results obtained during the investigation of the foaming capacity of butadiene styrene latexes. Analogous data were obtained for a number of other synthetic latexes, so that the results have a sufficiently general character. As criterium of the foaming capacity of latex the authors first used the "ultimate" height of the foam column h_0 reached prior to desintegration of the foam (proposed by A.V. Dumanskiy [Ref 2]). If the lifetime of a foam bubble is equal to τ and the velocity of the air entering through a capillary into the liquid is equal to u , foam will

Card 1/6

SOV/69-21-6-9/19

Studies on Latex Foams

accumulate up to the formation of a column of the height $h_0 = u\tau$. Evidently the magnitude h_0 depends on the properties of the system and can serve as a characteristic of its foaming capacity. Foam formation was carried out with a device illustrated by diagram 1. From a graduated cylinder 1 (250 mm) filled to above the highest mark water with established velocity controlled with cock 2 flows through cock 3 into bottle 4, from where it forces out the air. The velocity of the air is measured with flow meter 5, the pressure - with manometer 6. Cock 7 serves to adjust the device to a definite velocity of the air. The stopper of cock 8 has two perpendicularly arranged openings corresponding to the two branch conduits of the crane. The left branch conduit, which ends in a capillary, is introduced into the stopper of the foaming vessel 9, the right - connects the device with the atmosphere (for further particulars see article).

Card 2/6

SOV/69-21-6-9/19

Studies on Latex Foams

The preparation of foam from various latexes at different velocities of the air proved that the "ultimate" foam volume is not unambiguous for a given system, because it strongly depends on the speed of the air blown through. The higher the speed of the air, the higher the foam volume and the faster the disintegration of the foam. Table 1 gives the results obtained during foaming of butadiene styrene latex SKS-30 of various concentration and of a nekal solution (emulsifier in this latex) at different velocities of the air. Table 1 shows that the product of the "ultimate" foam volume V and the time t (Vt) (t is equal to the lifetime of a single foam bubble), does not depend on the speed of the air and can serve as a characteristic for the foaming capacity of a given system. The authors further prove that the magnitude Vt is determined by the physico-chemical properties of the liquid to be foamed. Starting from the assumption $Vt = V_{1nt} = \text{const}$

Card 3/6

SOV/69-21-6-9/19

Studies on Latex Foams

(Vt is equal to the product of the volume V_1 (ultimate size of a single bubble), the presumably constant number n of the bubbles and the time t) and considering three forces (lifting force of the bubble, vertical component of the surface tension retaining the bubble at the capillary, viscous resistance of the liquid) counteracting the take-off of the bubble from the capillary the authors finally deduce the equation

$$Vt = V_1 n t = \frac{2\pi\sigma \frac{n^2}{r} + \eta S \frac{du}{dn}}{(D-d)g} n t \quad (8)$$

(D - liquid density, d - air density, g - acceleration of gravity, r - capillary radius, σ - surface tension at interface liquid - air, - R - bubble radius -

Dard 4/6

SOV/69-21-6-9/19

Studies on Latex Foams

dius, η - viscosity of the liquid, S - contact surface bubble-liquid, du/dz - gradient of the velocity of the movement of the liquid layers), which fully characterizes the foaming capacity of a system. The authors further report on their investigation of the dependence of the properties of latex SKS-50N on concentration (Figure (Graph) 2) and glycerine content (viscosity) (Figure (Graph) 4) and also of the effect of surface active substances on the foaming capacity of dialyzed latex SKS-50N (Table 2). It was found that in a sufficiently concentrated latex viscosity appears as the basic factor determining the stability of the foam. There are 4 graphs, 2 tables, 1 diagram and 16 references, 8 of which are Soviet, 6 English, 1 German and 1 French.

Card 5/6

Studies on Latex Foams

SOV/69-21-6-9/19

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i latek-
snykh izdeliy, Moskva (Scientific Research Institute
of Rubber and Latex Products, Moscow) 4

SUBMITTED: May 27, 1958

Card 6/6

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S/138/60/000/004/001/008
A051/A029

15.9200 2209 2109

AUTHORS: Peyzner, A.B., Fermor, N.A., Korotkova, A.A., Skvirskaya, Ye.
P.

TITLE: The Production of Special Synthetic Latexes for the Manufacturing of Foam Rubber Products

PERIODICAL: Kauchuk i Rezina, 1960, No. 4, pp. 1 - 9

TEXT: In order to organize mass production of Soviet foam rubber articles, it was important to establish a raw material base, i.e., to introduce the production of synthetic latex suitable for the manufacturing of foam rubber. The article deals with the results of the work concerning the synthesis of the special latex. The possibility of using butadiene-styrene and chloroprene latexes was investigated which are produced in industry with a high content of dry residue (about 50%). The minimum permissible concentration is just about 50% when used for the purpose in question. (Refs. 1 - 4) The following latexes were tested: CKC-30Y(SKS-30U), the Nairites Л-1, Л-2, Л-3, Л-4, Л-5, Л-6 (L-1), (L-2), (L-3), (L-4), (L-5), (L-6). The foam rubber articles were produced by the mechanical foaming method. As a result of

Card 1/4

83835

S/138/60/000/004/001/008
A051/A029

The Production of Special Synthetic Latexes for the Manufacturing of Foam Rubber Products

the tests the following latexes were developed: 1) Chloroprene-butadiene and chloroprene-isoprene types, 2) SKS-30A (with 4.5 and 7.5% Nekal), 3) SKS-30 with Nekal, paraffinate of sodium, sodium soap, modified colophony and a mixture of fatty acid and colophony soaps as emulsifiers, 4) SKS-50, obtained with Nekal, 5) SKS-50, with ammonia paraffinate. It appeared that the possibility of obtaining satisfactory foam rubber from synthetic latex depended on the nature of the polymer, as well as the nature of the emulsifier. The most positive results were obtained in the case of the SKS-50 type latex, using ammonia salts of synthetic fatty acids. Therefore, the work was concentrated on the latter. It was found that the foaming in the latex, as well as its durability, improves with an increase in the pH of the latex to 10 and by lowering the foaming temperature. The authors also discuss the effect of the plasticity on the SKS-50 latex properties. There were 56 latex samples tested and it was found that a normal foam rubber was always obtained at a hardness of the polymer not over 1,700g. In order to produce satisfactory foam rubber from SKS-50 latex, it is imperative that the latter contains a

Card 2/4

83835

S/138/60/000/004/001/008

A051/A029

The Production of Special Synthetic Latexes for the Manufacturing of Foam Rubber Products

polymer with a relatively high plasticity. Some of the reasons for the influence of the plasticity on the quality of the foam rubber are discussed in Ref. 9 by Peyzner and co-workers. Regarding the kinetics of polymerization during synthesis, experiments showed that one reason for the ineffective expenditure of the initiator was the presence of iron compounds in the initial emulsion. A small amount of Trilon B was introduced into the initial emulsion in order to eliminate the harmful effect of the iron compounds. The content of the dry material had to be elevated, as being one of the conditions for using the latex in the production of foam rubber. The soap content was reduced in the initial emulsion in order to increase the size of the particles in the latex, which would secure the necessary concentration of dry material. The temperature of the polymerization was lowered and the conversion of monomers was increased to over 60%. The stability of the CKC-50 ПП (SKS-50 PG) latex was shown to be inadequate. An additional amount of ammonium paraffinate (up to 1.5% of the polymer weight) was added after completion of the polymerization to increase the stability of the polymer. In order to produce a test batch of SKS-50 latex, of increased size a tempera-

Card 3/4

83835

S/138/60/000/004/001/008
A051/A029

The Production of Special Synthetic Latexes for the Manufacturing of Foam Rubber Products

ture of 50°C, and a monomer conversion of 75% were proposed. A latex mixture of the composition given on page 6 was tested in the laboratory and the entire latex was shipped to the Balanda and Kursk Plants. Other latexes were tested as raw material in the production of foam rubber, such as butadiene-methyl styrene latex and butadiene-nitrile latex. The stability of SKN-40П (SKN-40P) latex is described and it is stated that this latex was sent to the Foam Rubber Article Plant in Balanda for use in production. The development of the SKN-10 latex synthesis is still under way. There are 8 tables, 4 figures, 17 references: 6 Soviet and 11 English. X

ASSOCIATION: Vsesoyuznyy Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (All-Union Scientific Research Institute of Synthetic Rubber imeni S.V. Lebedev)

Card 4/4

S/069/61/023/001/004/009
B020/B056

AUTHORS: Deryagin, B. V., Dukhin, S. S., and Korotkova, A. A.

TITLE: Diffusiophoresis in electrolyte solutions and its role in the mechanism of film formation from rubber latices by the method of ion deposition

PERIODICAL: Kolloidnyy zhurnal, v. 23, no. 1, 1961, 53-58

TEXT: The equation for the diffusiophoresis in a non-electrolyte solution (Ref. 1), obtained by simple generalization, is transformed for the case of an electrolyte in the form

$$v^D = \left[\frac{z^-}{z^+} \frac{f^-}{f^+} \right] c \text{ degree } \mu \approx \left[\frac{z^-}{z^+} \frac{f^+}{f^-} + \frac{z^+}{z^-} \frac{f^-}{f^+} \right] RT \text{ degree } c \quad (1),$$

where η is the viscosity, c is the molecular concentration of the electrolyte, $c = c^+/z^- = c^-/z^+$, μ is the chemical potential; R is the universal gas constant, T - absolute temperature, z^+ and z^- are the electrovalences of the ions:

$$f^+ = (1/c_0^+) \int_0^\infty x^+ h dx, \quad f^- = (1/c_0^-) \int_0^\infty x^- h dx,$$

Card 1/6

Diffusiophoresis in electrolyte ...

S/069/61/023/001/004/009
B020/B056

and γ the excess value of the concentration of cations and anions at the distance h from the sliding plane compared to the volume and c^+ and c^- the concentration of cations and anions, respectively, of the solution. The resulting rate of the diffusiophoresis of latex particles is

$$\vec{v} = \vec{v}_E + \vec{v}_D = (RT/\eta) D_{\text{eff}} \left[(z^-)^+ / D^+ + (z^+)^- / D^- \right] \text{ degrec} \quad (5),$$

where $D_{\text{eff}} = [D^+ D^- (z^+ + z^-)] / (z^+ D^+ + z^- D^-)$ (D^+ and D^- are the diffusion coefficients of the positive and negative ions). In order to determine the distribution of an electrolyte diffusing from a flat fixator layer of thickness h into the semispace, the problem of non-steady diffusion of the electrolyte into the unbounded space from a $2h$ thick layer is dealt with. The functions $c'(x, t)$ and $c(x, t)$, (x is the distance from the symmetry plane which coincides with the central plane of the fixator layer; t is the time from the beginning of the process) are satisfied, besides by the equations

$$\partial c' / \partial t = D'_{\text{eff}} (\partial^2 c' / \partial x^2), \quad \partial c / \partial t = D_{\text{eff}} (\partial^2 c / \partial x^2),$$

where D'_{eff} is the diffusion coefficient of the electrolyte in the fixator,

Card 2/6

S/069/61/023/001/004/009
B020/B056

Diffusiophoresis in electrolyte ...

also by the initial and boundary conditions

$$c'(x,t)|_{f=0} = c_0, c(x,t)|_{t=0} = c_1 \quad (6) \text{ and } c'(x,t)|_{x=\pm h} = c(x,t)|_{x=\pm h} \quad (7)$$

$D'_{\text{eff}} (\partial c' / \partial x)(x,t)|_{x=\pm h} = D_{\text{eff}} (\partial c / \partial x)(x,t)|_{x=\pm h}$ (7). When using the solution of the analogous heat problem concerning the solidification of the liquid layer, the relation

$$c(x,t) = c_0 + (c_1 - c_0) \frac{(D'_{\text{eff}}/D_{\text{eff}})^{1/2}}{1 + (D'_{\text{eff}}/D_{\text{eff}})^{1/2}} \left[\operatorname{erfc} \frac{x-h}{2(D_{\text{eff}}t)^{1/2}} - (1-x) \sum_{n=1}^{\infty} (-x)^{n+1} \operatorname{erfc} \frac{x-h+2nh(D'_{\text{eff}}/D_{\text{eff}})^{1/2}}{2(D_{\text{eff}}t)^{1/2}} \right] \quad (8)$$

is obtained, where $K = \left[1 - (D'_{\text{eff}}/D_{\text{eff}})^{1/2} \right] / \left[1 + (D'_{\text{eff}}/D_{\text{eff}})^{1/2} \right]$

For the rate of diffusiophoresis, the equation

$$v(x,t) = \frac{dx}{dt} = - \frac{A}{2\sqrt{D_{\text{eff}}t}} \left[e^{-\frac{(x-h)^2}{4D_{\text{eff}}t}} - (1+x) \sum_{n=1}^{\infty} (-x)^{n+1} e^{-\frac{[x-h+2nh(D'_{\text{eff}}/D_{\text{eff}})^{1/2}]^2}{4D_{\text{eff}}t}} \right] \quad (9)$$

Card 3/6

Diffusiophoresis in electrolyte ...

S/069/61/023/001/004/009
B020/B056

is obtained, where

$$A = \frac{2(c_0 - c_1) RT (D_{eff}^+ D_{eff}^-)^{1/2} D_{eff}}{\sqrt{\pi} \eta [1 + (D_{eff}^+ / D_{eff}^-)^{1/2}]} \left(\frac{z^+ \xi^+}{D^+} + \frac{z^- \xi^-}{D^-} \right); \quad (10)$$

A depends on c via ξ^+ and ξ^- . For the surface density $\Gamma(t)$ of the precipitated latex layer as dependent on time, the relation

$$\Gamma(t) = \rho_0 (x_0(t) - h) = \rho_0 4 k_0 (D_{eff} t)^{1/2} = \frac{2 \rho_0 RT}{\eta} \left(\frac{z^+ \xi^+}{D^+} + \frac{z^- \xi^-}{D^-} \right) (c_0 - c_1) \frac{(D_{eff}^+)^{1/2}}{(\pi)^{1/2} [1 + (D_{eff}^+ / D_{eff}^-)^{1/2}]}, \quad (23)$$

is obtained, where c_1 is the initial concentration of the latex. Finally, relations are given for the rate of ion deposition $\Gamma(t)$ directly by means of the potential

Card 4/6

Diffusiophoresis in electrolyte ...

S/069/61/023/001/004/009
B020/B056

$$\Gamma(t) = \frac{\rho_0 \epsilon (c_0 - c_1) (kT)^2 (D'_{eff} t)^{1/2}}{\pi^{3/2} \eta c_0 z^2 e^2 [1 + (D'_{eff}/D_{eff})^{1/2}]} \left\{ \frac{\ln [1 + \exp(-ze\zeta/2kT)]/2}{D^+} + \frac{\ln [1 + \exp(ze\zeta/2kT)]/2}{D^-} \right\}, (z^+ = z^- = z) \quad (A)$$

$$\Gamma(t) = \frac{\rho_0 \epsilon kT (c_0 - c_1) (D^+ - D^-) (D'_{eff} t)^{1/2}}{2\pi^{3/2} \eta e c_0 (z^+ + z^-) D^+ D^- [1 + (D'_{eff}/D_{eff})^{1/2}]}, (|\zeta| < 25 \text{ m}\theta)$$

$$\Gamma(t) = \frac{\epsilon \rho_0 kT (c_0 - c_1) \zeta (D'_{eff} t)^{1/2}}{2\pi^{3/2} \eta e c_0 z^- D^- [1 + (D'_{eff}/D_{eff})^{1/2}]}, (\zeta \gg 25 \text{ m}\theta) \quad (B)$$

$$\Gamma(t) = \frac{\epsilon \rho_0 kT (c_0 - c_1) \zeta (D'_{eff} t)^{1/2}}{2\pi^{3/2} \eta e c_0 z^+ D^+ [1 + (D'_{eff}/D_{eff})^{1/2}]}, (-\zeta \gg 25 \text{ m}\theta)$$

Card 5/6

Diffusiophoresis in electrolyte

S/069/61/023/001/004/009
B020/B056

wherever this is possible. A. N. Frumkin is mentioned. There are
4 Soviet-bloc references.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Moskva (Institute of
Physical Chemistry of the AS USSR, Moscow)

SUBMITTED: July 12, 1960

Card 6/6

S/069/61/023/001/006/009

H14B204

AUTHORS: Sandomirskiy, D. M. and Korotkova, A. A.

TITLE: Investigation of latex foams

PERIODICAL: Kolloidnyy zhurnal, v. 23, no. 1, 1961, 95-99

TEXT: In this paper, the authors present the results of an investigation on the effect of some characteristics of synthetic latices, such as concentration, surface tension, and viscosity, upon the quantity K (ratio of the foam volume to the volume of the liquid phase in it), the dispersion, and the stability of the foams produced mechanically. The quantity K was determined by weighing a certain foam volume and then evaluating the equation $K = V_f/V_l = V_p \gamma_l / g_f$, where V_f denotes the foam volume, V_l the volume of the latex, γ_l the specific gravity of the latex, and g_f the weight of the foam. The dispersion of the foam was ascertained by determining the mean diameter of the gas bubbles from a number of diameters measured on a photograph, wherein the equation

Card 1/8

S/069/61/023/001/006/009
B 124/B 204

Investigation of latex foams

$d_{av} = \sum d_i n_i / \sum n_i$ was employed; the distribution curves are plotted. The stability to formation of layers, the beginning of flow into a calibrated neck of a funnel (τ), the flow velocity (v_1), and the time of separation into layers (v_2) of the latex were determined, too. The mechanical properties of the foam structure were ascertained through tangential shift of a notched plate (Ref. 6) with the device shown in Fig. 1. The notched plate (1) was suspended on string (6) which is laid over block (7). The foam is poured into the planoparallel-walled container (2) on the movable table (3). In the experiment, plate (1) is immersed into the foam by stepwise lifting of table (3); equilibrium is adjusted by weights (8). The plate was pulled out of the foam by the constant load of the weights upon scale (9). The shift of the plate was determined by a microscope (5) on the micro-scale (4). Table 1 illustrates the dependence of the foam properties on the concentration of Nairite $\Pi-4$ (L-4) latex. K and the stability of the foam decrease with increasing dilution of the latex. The authors also studied the effect of surface tension σ upon the properties of foam of CKC-50H (SKS-50N)-type polyvinylstyrene latex with addition

Card 2/8

S/069/61/023/001/006/009
B124/B204

Investigation of latex foams

of stabilizers (Table 2) and the effect of the viscosity of Nairite L-4 latex with addition of ammonium caseinate on the properties of the foam. The distribution curves of the bubble diameters of latex foams of different viscosity (Fig. 3), the deformation curves of foam from latex of a viscosity of 59 cpoise, and the dependence of the tensile strength of the foam on the time of ageing (Figs. 5,6) are given. There are 6 figures, 3 tables, and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy, Moskva (Scientific Research Institute of Rubber and Latex Products, Moscow)

SUBMITTED: July 8, 1959

Card 3/3

Investigation of latex foams

Legend to Table 1: Dependence of the properties of the foam on the concentration of Nairite L-4 latex.

- 1) Latex concentration, 2) min,
- 3) ml/min.

S/069/61/023/001/006/009
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Концентрация латекса, %	K	τ , мин	ν , мл/мин	v , мл/мин	T , г
50	0,2	4,0	1,25	0,08	1,1
40	8,0	2,25	1,70	0,25	1
30	10,0	1,5	1,25	0,40	
20	7,9	1,5	1,5	0,6	
10	7,0	1,25	2,0	0,8	

Table 1

Legend to Table 2: Dependence of the properties of the foam on the surface tension of the latex SKS-50N. 1) Nekal addition, 2) dyne/cm, 3) cpoise, 4) min, 5) ml/min.

Некаль, %	σ , $\frac{\text{дин}}{\text{см}}$	η , спуз	K	τ , мин	ν , $\frac{\text{мл}}{\text{мин}}$	v , $\frac{\text{мл}}{\text{мин}}$	T , г
0	45,4	4,7	1,7	1,5	2,2	1,0	
1	40,4	4,4	3,0	2,8	1,5	0,55	
2	37,6	4,3	3,3	2,5	1,75	0,44	
3	33,7	4,4	3,8	2,5	1,75	0,44	

Table 2

Card 4/8

S/069/61/023/001/006/009
B124/B204

Investigation of latex foams

Legend to Table 3: Dependence of the properties of the foam on the viscosity of 47% Nairite L-4 latex. 1) Ammonium caseinate, 2) dyne/cm, 3) cpoise, 4) min, 5) ml/min, 6) d_{av} , cm.

Table 3

Качество аммония, % 1	σ , $\frac{мН}{см}$ 2	η , сПз 3	K	τ , мин 4	v , $\frac{мл}{мин}$ 5	ν , $\frac{мН}{см}$ 6	d_{cp} , см 7	Tab. 3
0	36,0	7,4	8,5	2,9	2,5	0,44	0,019	
0,5	36,8	12,4	7,2	10,7	0,5	0,08	0,017	
1,0	36,8	31,0	6,2	22,0	0,14	0,05	0,018	
1,25	36,8	59,0	5,0	63,0	0,02	0	0,015	

Card 5/8

Investigation of latex foams

Legend to Fig. 3: Distribution curve of the bubble diameters of foams from latices of different viscosity (cpoise).
 1) 7.3; 2) 12.8, 3) and 4) 59.
 a) diameter of the foam bubbles, mm.

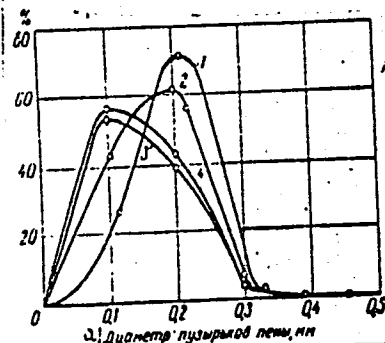


Fig. 3

Investigation of latex foams

Legend to Fig. 4: Kinetic deformation curves of foam from latex having a viscosity of 59 cpoise, a) mm, b) min.

S/069/61/023/001/006/009
B124/B204

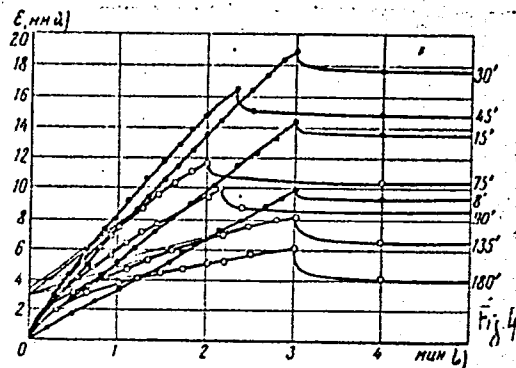


Fig. 4

Investigation of latex foams

Legend to Fig. 5: Dependence of the tensile strength of the foam on the time of ageing $\eta_{lat} = 59$ cpoise.

- a) Viscosity of the foam $\eta \cdot 10^4$ dyne.sec/cm²,
- b) time of ageing of the foam, min.

Legend to Fig. 6: Dependence of the tensile strength of the foam on the time of ageing: η_{lat} 1) = 7.4, 2) = 12.8 cpoise. a) Viscosity of the foam $\eta \cdot 10^4$ dyne.sec/cm², b) time of ageing of the foam, min.

Card 8/8

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B124/B204

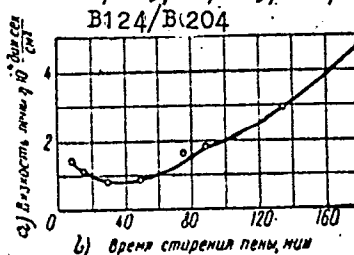


Fig. 5

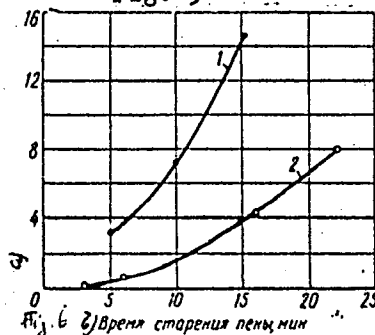


Fig. 6

S/138/62/000/008/005/007
A051/A126

AUTHORS: Berlin, R. L., Dogadkin, B. A., Zachesova, G. N., Korotkova, A. A.,
Linichenko, A. I., Shokhin, I. A.

TITLE: Production of foam rubber articles from latex using aqueous rubber
dispersions

PERIODICAL: Kauchuk i rezina, no. 8, 1962, 14 - 16

TEXT: A method has been developed for the production of foam rubber articles with partial replacement of the latex by aqueous dispersions of old rubber or waste products from foam rubber production. The technique of old rubber dispersion was developed at the НИИШП (NIIShP), whereby the aqueous dispersion of the rubber is a polydispersed colloidal system. Dispersions prepared with colophony as the disperser and 3% aqueous solution of NaOH, as the soaping agent, were used in developing the production method of the latex mix for the foam rubber articles. The latex mix of the foam rubber, based on "revertex-standard" and CKC -50 ПП (SKS-50PG) latex, using various types of aqueous rubber dispersions, contained potassium paraffinate, vaseline oil or its emulsion, as the foaming agent, or

Card 1/2

S/138/62/000/008/005/007
A051/A126

Production of foam rubber articles from...

dispersion of vulcanized substances (sulfur, diphenylguanidine, cymate, zinc mercaptobenzothiazol, zinc oxide). The quantity of vulcanizing agents in the mixes was calculated according to the rubber substance of the latex. They also contained a gelatinizing solution (10 - 20% solution of ammonium chloride, 10% solution of ammonia and triethanolamine). The obtained articles met the commercial requirements. The cutting-out process caused no change in the physico-mechanical properties of the foam rubber articles. The latter retain their color when using dispersions produced from foam rubber waste products. It is concluded that by replacing 20 - 30% of the synthetic and natural latex with aqueous dispersions of rubber, the quality of the foam rubber produced by the foaming method, does not drop. According to preliminary calculations, the use of aqueous dispersions of rubber in the production of foam rubber articles should offer considerable technical and economic advantages. There are 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy i
Nauchno-issledovatel'skiy institut shinnoy promyshlennosti
(Scientific Research Institute of Rubber and Latex Articles and
Scientific Research Institute of the Tire Industry)

Card 2/2

S/727/61/000/000/006/009
I031/I242

AUTHORS: Korotkova, A.A., Berlin, R.L.

TITLE: Preparation of foam rubber from synthetic latex

SOURCE: Sintez lateksov i ikh primeneniye. Ed. by A.V. Lebedev, A.B. Peyzner, and N.A. Formor. Leningrad, Goskhimizdat, 1961, 213-223

TEXT: The purpose of this study was the development of a correct procedure and industrial equipment for the manufacture of foam rubber. The foam rubber was prepared from a butadiene-styrene (KAC-50H (SKS-50 PG) latex, a butadiene-nitrile **CKH-10** (SKN-10) latex and a polychloroprene **Л-7** (L-7) latex. The product obtained from SKS-50 PG latex has mechanical properties similar to those of a natural latex, but has a strong odor due to the presence of free styrene. Foam rubber made from nitrile latex is odorless and inert to benzene. The polychloroprene latex-base foam rubber, though inferior in quality, is non-combustible. Among the topics considered in the

Card 1/2

S/727/61/000/000/006/009
I031/I242

Preparation of foam rubber...

exploratory study are foam characteristics and foaming kinetics, effect of various additives, gelatinization and vulcanization problems, and foaming agents. Equipment for continuous-processing was designed for the main stages of production and a pilot unit constructed. The vulcanized foam rubber is washed continuously by sprinkling and squeezing through rotating rolls. There are 3 figures and 4 tables. ✓

ASSOCIATION: NIIR

Card 2/2

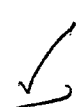
S/138/62/000/010/006/008
A051/A126

AUTHORS: Korotkova, A.A., Sandomirskiy, D.M., Shepeleva, T.G.

TITLE: Properties of natural latex foam

PERIODICAL: Kauchuk i rezina, no. 10, 1962, 47 - 50

TEXT: Results of an investigation of foam formation and natural latex foam properties are submitted. Effects of concentration, viscosity, and surface tension of latex on the properties of produced foams were studied. The effect of ammonia content, thermal aging and additions of surface-active substances on the properties of qualitex natural latex was investigated. Surface tension of the latex was determined according to the ring removal method. The viscosity was measured on the Heplar viscosimeter. The foam formation activity of the latex is expressed through vt (v - volume of the foam, formed by pneumatic foaming over a period of time t , prior to the beginning of bubble formation). Dilution of the qualitex sharply reduces its viscosity and slightly increases its surface tension. Its foam-forming activity correspondingly drops, the multiplicity increases and the resistance to mechanical foam lamination decreases.



Card 1/3

S/138/62/000/010/006/008
A051/A126

Properties of natural latex foam

The removal of the ammonia to a value of pH = 8.5 does not change the qualitex. At pH < 8.5, the latex viscosity sharply increases. The surface tension and foam-forming activity of the qualitex increases slightly. The foam multiplicity does not change, the resistance to lamination drops sharply, and the latex serum exfoliates. The introduction of surface-active substances does not considerably alter the qualitex pH; all these substances, excepting ammonium caseinate, in dosages of up to 0.5%, first sharply and then slightly reduce the surface tension and increase the qualitex viscosity. The foam-forming activity is reduced by the surface-active substances with the exception of non-ionized ОП-10 (OP-10). The latter increases viscosity and, correspondingly, the foam-forming activity. The tested substances were arranged in the following sequence, according to optimum properties which they give to the qualitex: ПТ < ПК < ОП -10 < РК < РТ and КА (ПТ < РК < ОП-10 < РК < РТ and КА); the foam-forming activity, multiplicity and mechanical foam resistance, taken as the main indices. The most favorable properties are obtained with triethanolamine paraffinate. Thermal aging of the qualitex causes after 7 days the surface tension to increase; after 3 days, the viscosity. Certain physico-chemical law sequences are experimentally confirmed, and it is further concluded that there is also an optimum viscosity value for

Card 2/3

Properties of natural latex foam

S/138/62/000/010/006/008
A051/A126

natural latex, lying within the range of 35 - 50 cP. There are 7 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy i Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova (Scientific Research Institute of Rubber and Latex Articles and Moscow Institute of Fine Chemical Technology im. M.V. Lomonosov)

Card 3/3

S/727/61/000/000/002/009
I031/I242

AUTHORS: Peyzner, A.B., Lebedev, A.V., Fermor, N.A., Skvirskaya,
Yo.P., Korotkova, A.A., Berlin, R.L., Taranenko, S.V.

TITLE: Synthesis of latex for foam rubber manufacture

SOURCE: Sintez lateksov i ikh primeneniye. Ed. by A.V. Lebedev,
A.B. Peyzner, and N.A. Fermor, Leningrad, Goskhimizdat,
1961, 21-40

TEXT: The purpose of this work was the development of the manufac-
ture of foam rubber from synthetic latexes produced in the USSR.
The initial experiments were performed with ~~CKC-30U~~ (SKS-30U) and
chloroprene latexes subsequently, new experimental latexes were
synthesized: chloroprene-butadrene and chloroprene-isoprene; buta-
drene-styrene latexes ~~CKC-30A~~ (SKS-30A), ~~CKC-30~~ (SKS-30), ~~CKC-50~~
(SKS-50) with Mekal and ~~CKC-50~~ (SKS-50) with ammonium paraffinate.
German Buna S-3 and Buna-SS-Special (butadrene-styrene 50:50) were
also investigated. The results were unsatisfactory with the excep-

Card 1/3

S/727/61/000/000/002/009
I031/I242

Synthesis of latex for...

tion of SKS-50 latex of modified mix, and the detailed study was narrowed to this material only. Factors like full saturation of particles film, increased pH of the solution; increased concentration of solids, and low foaming temperature, improve the foaming ability of a latex. Foam stability in the SKS-50 latex was achieved by an increase in soap content up to 10% of weight of solids. Optimum plasticity depends on the nature of polymer, on condition of polymerization, on mix composition and on technology of the process. A relation exists between the rate of polymerization and the solids content of the latex. The smaller the size of particles, the higher the rate of polymerization. On the other hand, the small-particle latex, due to its higher viscosity thickness at a lower solids content. The SKS-50 latex was stabilized with potassium paraffinate which reduced the surface tension to 45-48 dynes/cm. The possibility of substituting α -methylstyrene for styrene in a butadiene-styrene polymer was studied. The polymerization

Card 2/3

S/727/61/000/000/002/009
I031/I242

Synthesis of latex for...

rate was slowed down by 20-25%. The foam rubber obtained complies with specifications, except for its odor. A butadiene-nitrite latex with paraffine soap proved to be resistant to the action of benzene and gave an odorless foam rubber of good quality. There are 7 figures and 10 tables.

ASSOCIATION: VNIISK, NIIR, RTI Leningrad plant

Card 3/3

SANDOMIRSKIY, D.M.; KOROTKOVA, A.A.

Latex foams. Koll. zhur. 23 no.1:95-99 Ja-P '61. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy, Moskva.

BERLIN, R.L.; DOGADKIN, B.A.; ZACHESOVA, G.N.; KOROTKOVA, A.A.; LINICHENKO, A.I.; SHOKHIN, I.A.

Manufacture of spongy goods from latex using water dispersions of rubber. Kauch i rez. '21 no.8:11, 16 Ag '62. (MIRA 16:5)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateknykh izdeliy i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Rubber goods)

VASILYEV, O.B.; KOROTKOVA, A.N.

Observations of Perseids in 1952. Biol.VAGO no.16:36 '55.
(MLRA 8:6)

1. Leningradskoye otdeleniye VAGO, yunosheskaya sektsiya.
(Meteors--August)

Korotkova, A.V.

DONDUA, A.K.; KOROTKOVA, A.V.

Meeting of embryologists. Vest.Len.Un. 10 no.10:129-132 0 '55.
(Embryology) (MLRA 9:1)

ITSKOVICH, Georgiy Mikhaylovich; VINOKUROV, Anatoliy Ivanovich;
KOROTKOVA, A.V., red.; GARINA, T.D., tekhn. red.

[Strength of materials] Soprotivlenie materialov; rukovodstvo
dlia uchashchikhsia mekhaniko-mashinostroitel'nykh spetsial'-
nostei zauchnykh tekhnikumov. Izd.2., perer. Moskva, Gos.
izd-vo "Vysshaya shkola," 1962. 78 p. (MIRA 16:5)
(Strength of materials)

IVANOV, Nikolay Nikolayevich; KHRAMOVA, Irina Sergeevna; KOROTKOVA,
A.V., red.; GOROKHOVA, S.S., tekhn. red.

[Descriptive geometry and machinery drawing] Nachertatel'naya geometriia i mashinostroitel'noe cherchenie; metodicheskie ukazaniia i kontrol'nye zadaniia dlia studentov vsekh spetsial'nostei vechernikh i zaocnykh vysshikh tekhnicheskikh uchebnykh zavedenii i fakul'tetov, krome stroitel'nykh, mashinostroitel'nykh, priborostroitel'nykh i mekhaniko-tekhnologicheskikh. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 133 p.

(MIRA 16:4)

(Geometry, Descriptive) (Machinery--Drawing)

ITSKOVICH, Georgiy Mikhaylovich; VINOKUROV, Anatoliy Ivanovich;
KOROTKOVA, A.V., red.; GARINA, T.D., tekhn.red.

[Strength of materials; a manual for students of
mechanical engineering in correspondence technical schools]
Soprotivlenie materialov; rukovodstvo dlia uchashchikhsia
mekhaniko-mashinostroitel'nykh spetsial'nostei zaochnykh
tekhnikumov. Izd.2., perer. Moskva, Gos.izd-vo "Vysshaia
shkola," 1962. 78 p. (MIRA 17:2)

KLEYN, Georgiy Konstantinovich, prof., doktor tekhn. nauk, prof.;
REKACH, Vladimir ~~Germanovich~~, doktor tekhn. nauk, prof.;
ROZENBLAT, Genya Isaakovna, kand. tekhn. nauk, dots.;
SMIRNOV, A.F., prof., doktor tekhn. nauk, retsenzent;
KOSTROMIN, V.S., prof., retsenzent; L'VIN, Ya.B., dots.,
retsenzent; OSELED'KO, A.I., dots., retsenzent;
BARCHENKOV, A.G., dots., retsenzent; BYCHKOV, D.V., prof.,
doktor tekhn. nauk, red.; KOROTKOVA, A.V., red.

[Manual for conducting lessons in a special course in
structural mechanics] Rukovodstvo k provedeniiu zaniatii po
spetsial'nomu kursu stroitel'noi mekhaniki. Moskva, Vys-
shaia shkola, 1964. 295 p. (MIRA 18:3)

GOFMAN, Irina Petrovna; MIKHAYLOV, M.M., otv. red.; KOROTKOV, A.V.,
red.

[Technology of metals and structural materials. Program
(on the basis of an 8- and 11-year secondary school of 95
hours): Methodological instructions and test assignments
for students] Tekhnologiya 8 i 11 klassov srednei shkoly, ob'em
95 chasov): Metodicheskie ukazaniya i kontrol'nye zadaniya dlia
uchashchikhsia metallurgicheskikh spetsial'nostei zaochnykh
srednikh spetsial'nykh uchebnykh zavedenii. Moskva, Vysshiaia
shkola, 1964. 71 p. (MIRA 18:5)

1. Russia (1923-. U.S.S.R.) Ministerstvo vysshego i srednego
spetsial'nogo obrazovaniya. Tsentral'nyy metodicheskii kabinet
po srednemu spetsial'nomu obrazovaniyu.

L 18394-66 EWT(m)/EWP(j)/T WW/RM

ACC NR: AP6003408

SOURCE CODE: UR/0190/66/008/001/0020/0025

AUTHORS: Garbuz, N. I.; Zhibankov, R. G.; Korotkova, A. Ya.; Kryazhev, Yu. G.; Rogovin, Z. A.

ORG: Institute of Physics, AN BSSR (Institut fiziki AN BSSR); Moscow Textile Institute (Moskovskiy tekstil'nyy institut)

TITLE: Study of carbonyl-substituted cellulose graft copolymers by means of IR spectroscopy (189th report in series "Investigation of Structure and Properties of Cellulose and Its Derivatives")

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 1, 1966, 20-25

TOPIC TAGS: graft copolymer, cellulose plastic, IR spectroscopy / IK-10 IR spectrophotometer

ABSTRACT: IR spectra of carbonyl-substituted graft copolymers of cellulose and polymethylvinylketone^(I), of polymethacrolein^(II), and of poly-2-methyl-5-vinyl-N-ethanalpyridinium chloride have been investigated. Preparation of the graft copolymers has been described earlier by A. Ya. Korotkova and Z. A. Rogovin (Vysokomolek. soyed., 7, 1571, 1965); and by A. Ya. Korotkova, Yu. G.

Card 1/2

UDC: 661.728.89+678.01:53

L 18394-66

ACC NR: AP6003408

Kryazhev, and Z. A. Rogovin (Vysokomolek. soyed., 6, 1980, 1964). The spectra were obtained on a double beam spectrophotometer IK-10 in the regions 2600--3800 cm^{-1} (LiF prism), 700--1800 cm^{-1} (NaCl prism), and 400--700 cm^{-1} (KBr prism). Carbonyl absorptions in these regions (typical for the investigated graft copolymers and homopolymers) are described and discussed. Mechanisms of methylvinylketone and methacrolein polymerization during the formation of graft polymers of cellulose with (I) and (II) have been investigated. Orig. art. has: 1 table, 5 figures, and 4 structures.

SUB CODE: 07/ SUBM DATE: 04Feb65/ ORIG REF: 006/ OTH REF: 003

Card 2/2 mc

L 64545-65 EWT(m)/EPF(c)/EWP(j)/T/ENA(c) RPL WW/RM
 ACCESSION NR: AP5023220 44.65 UR/0190/64/006/011/1980/1986
 AUTHOR: Korotkova, A. Ya.; Kryazhev, Yu. G.; Rogovin, Z. A. 44.55 35
 TITLE: Synthesis of graft copolymers of cellulose containing aldehyde groups 32
 SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 11, 1964, 1980-1986
 TOPIC TAGS: aldehyde, macromolecule, cellulose, graft copolymer, copolymerization, chemical reaction

ABSTRACT: The article represents the 156th communication from the series "Investigation of the Structure and Properties of Cellulose and Its Derivatives." The possibility of introducing aldehyde groups into the macromolecule of cellulose by synthesis of graft copolymers of cellulose with α -methylacrolein and poly-2-methyl-5-vinyl-N-ethanal-pyridinium chloride is investigated. The graft copolymer of cellulose with α -methylacrolein was synthesized for the first time by free radical graft copolymerization. It was shown that graft copolymerization takes place both at the C=C double bond and at the aldehyde group. Addition of the α -methylacrolein molecule to the diazo group is also possible. The graft copolymer of cellulose and poly-2-methyl-5-vinyl-N-ethanal-pyridinium chloride was synthesized by the

Card 1/2

L 64545-65

ACCESSION NR: AP5023220

addition of monochloroacetaldehyde to the graft copolymer of cellulose and poly-2-methyl-5-vinyl-pyridine. The influence of temperature and the monochloroacetaldehyde concentration on the amount of monochloroacetaldehyde added was studied. The graft copolymers were used for the production of cellulose derivatives possessing ion exchange properties. Sodium bisulfite was added to the C=C double bonds of the grafted poly-alpha-methylacrolein. The product obtained contained up to 7.87% SO₃H and possessed a cation exchange capacity of 0.9 mg-equiv/g with respect to 0.1 N NaOH. The aldehyde groups in graft poly-2-methyl-5-vinyl-N-ethanalphthalpyridinium chloride were oxidized to carboxyls to obtain a modified cellulose possessing amphoteric properties. The product, containing 5% carboxyl groups, exhibited a cation exchange capacity of 1.1 mg-equiv/g and an anion exchange capacity of 1.5 mg-equiv/g.

Orig. art. has: 7 formulas, 3 tables, 1 graph.

ASSOCIATION: Moskovskiy tekstil'nyy institut (Moscow Textile Institute) 44.55

SUBMITTED: 09Jan64

ENCL: 00

SUB CODE: OC, CC

NR FEF SOV: 001

OTHER: 003

JPRS

Card 2/2 ml

L 1578-66 (A) ENT(m)/EPF(c)/ENP(j)/T RPL WW/RM

ACCESSION NR: AP5022602

UR/0190/65/007/009/1571/1575

541.64+661.728+678.744

AUTHORS: Korotkova, A. Ya.; Rogovin, Z. A.

TITLE: Synthesis of cellulose-polymethylvinyl ketone graft copolymers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1571-1575

TOPIC TAGS: polymer, copolymer, graft polymer, cellulose, polymethylvinyl ketone, light resistance, thermal stability, wear resistance

ABSTRACT: A cellulose derivative containing keto groups was obtained for the first time by the synthesis of cellulose-polymethylvinyl ketone graft copolymer. In comparison to the effect of various known grafting methods on the composition

of the resulting copolymer, it was found that by using Cu^{+1} salts as a reducing agent the synthesis proceeded without the simultaneous homopolymer formation. The effect of various factors (temperature, reaction time, methylvinyl ketone concentration, bath ratio) on the graft copolymerization and on the composition of the resulting copolymer was investigated. Tabulated data show that a temperature increase up to 50C increases the polymethylvinyl ketone content in the copolymer. A further temperature increase does not cause any considerable increase of

Card 1/2

L 1578-66

ACCESSION NR: AP5022602

content. The composition of the graft copolymer is greatly affected by the monomer concentration in the aqueous solution under the following conditions: 80C, one hour of reaction time, bath ration 50, $(\text{CuCl}) = 1$ mole/mole NH_2 group, and a

nitrogen content of 0.495% in the alkylated cellulose. Some properties (light resistance, thermal stability, and wear resistance) of the graft copolymers were investigated. It was established that the introduction of keto groups into the cellulose macromolecule increases considerably the light fastness but strongly decreases the thermal resistance of the modified cellulose fabrics. The wear strength of the original and of the graft copolymer fabrics is the same. The preparation of graft copolymers and the determination of the keto group content in the copolymer are briefly described. The authors thank Ye. G. Karapetyan for supplying the monomer. V. V. Larin took part in the experiments. Orig. art. has 5 tables.

ASSOCIATION: Moskovskiy tekstil'nyy institut (Moscow Textile Institute)

SUBMITTED: 17Oct64

ENCL: 00

SUB CODE: GC, CC

NO REF SCV: 005

OTHER: 001

Card 2/2

PISKUNOVA, V.G., nauchnyy sotrudnik; ANATOVSKAYA, V.S., nauchnyy sotrudnik;
KOROTKOVA, G.D., nauchnyy sotrudnik; MEBURENKO, A.B., nauchnyy
sotrudnik; DANILOV, V.I., nauchnyy sotrudnik; SEMAN, M.I., nauchnyy
sotrudnik; YERMINA, Z.I., nauchnyy sotrudnik

Industrial hygiene in the production and use of benzanthron. Gig.
i san., 21 no.7:22-26 J1 '56. (MIRA 9:9)

1. Iz Ukrainskogo tsentral'nogo instituta gigiyeny truda i
professional'nykh zabolevaniy

(ANTHRACENE, rel. cpds.

benzanthracene-7-one, inj. eff. in indust.)

(INDUSTRIAL HYGIENE

benzanthracene-7-one pois.)

Card : 1/1

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000824920001-5

L 45104-65 EWP(d)/EPA(s)-2/EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/
EWP(l)/EWA(c) PF-4 JB/HM
ACCESSION NR: AP5010894

UR/0286/65/000/007/0082/0063

AUTHORS: Slavin, G. A.; Gusev, A. T.; Korotkova, G. M.; Filippov, M. A.; Petrov, A. V.

TITLE: Device for welding with a pulsed arc, Class 21, No. 164716

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 82-83

TOPIC TAGS: welding equipment, arc welding

ABSTRACT: This Author Certificate presents a device for welding with a pulsed arc. It contains an oscillator and a source of a pulsed operating arc and is provided with a welding transformer and a chopper, e.g., a thyatron. To increase the quality of the welded joint, a regulated supply of the on-duty arc is used, e.g., containing a transformer, a rectifier, and a potentiometer. The supply is connected to the welding electrodes in parallel with the pulsed arc source (see Fig. 1 on the enclosure). To improve the pulse shape of the welding current, the pulsed operating arc source is provided with a four-winding saturation choke. The operating winding of this choke is made of two windings connected in opposition and is connected in series with the secondary of the welding transformer. The control winding of the choke is connected to the chopper, and the positive current

Cord 1/2

L 45404-65

ACCESSION NR: AP5010894

feedback is connected in series in the electrode-product circuit. Orig. art. has:
1 diagram.

ASSOCIATION: none

SUBMITTED: 18Jul62

ENCL: 01

SUB CODE: IE, MM

NO REF SOV: 000

OTHER: 000

Card 2/3

SLAVIN, G.A. (Moskva); PETROV, A.V. (Moskva); KOROTKOVA, G.M. (Rzhev);
FILIPPOV, M.A. (Rzhev)

Feed source of a direct current pulsation arc. Avtom.svar. 18
no.11:63-67 N '65. (MIRA 18:12)

1. Submitted April 29, 1965.

L 11211-66 EWT(m)/EWP(t)/EWP(k)/EWP(b)/EWA(c) LJP(c) JD/HV

ACC NR: AP6000617

SOURCE CODE: UR/0135/65/000/012/0018/0020

AUTHOR: Slavin, G. A. ^{44,55} (Candidate of technical sciences); Petrov, A. V. ⁵⁷ (Candidate of technical sciences); Smirnova, S. V. ^{44,55} (Engineer); Korotkova, G. M. ^{44,55} (Engineer) ^B

ORG: none

TITLE: Automatic pulsed-arc welding of thin aluminum-alloy sheets with a nonconsumable electrode ^{44,55} ^{44,55}

SOURCE: Svarochnoye proizvodstvo, no. 12, 1965, 18-20

TOPIC TAGS: aluminum, aluminum alloy, ~~alloy sheet~~, ~~this sheet~~, ~~sheet welding~~, ~~arc welding~~, ~~arc welding~~, ~~pulsed arc welding~~, ~~nonconsumable~~, ~~electrode welding~~, TIG welding/AMg6 alloy ⁴

ABSTRACT: Aluminum-alloy sheets 0.2—1.0 mm thick can be successfully joined by pulsed-arc TIG welding in which two arcs are employed: a continuously maintained low-ampere pilot arc and a pulsed welding arc. Such a pulsed arc under optimum conditions produces better penetration with a considerably lower heat input, thus reducing warpage and the danger of burning through. The effectiveness of the pulsed arc is determined by the current and duration of pulse, the ratio of pause duration to pulse duration (G), and the pitch of the weld spots. Experiments conducted with AMg6 alloy sheets showed that for each thickness within 0.2—1.0 mm there is an optimal range of parameters. The minimum warpage in sheets 0.5 and 0.7—1.0 mm thick is achieved at a G of 1.5—3.0 and 1.0—2.0, respectively. The optimum duration

Card 1/2

UDC: 621.791.753.93-52:669.715-415

L 11211-66

ACC NR: AP6000617

of the total cycle (pulse + pause) for sheets 0.5 mm and 0.7—1.0 mm thick was 0.16—0.32 sec and 0.28—0.42 sec, respectively. Shorter cycle durations result in weld contamination and increased warpage. The data obtained in these experiments were used in designing power sources for pulsed-arc welding and were compiled into five nomograms from which total cycle, pulse and pause duration, arc current, and spot pitch can be selected. Orig. art. has: 6 figures. (DV)

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 4174

Card 2/2

L 32689-66 EWT(m)/EWP(v)/T/EWP(t)/EWP(k) IJP(c) JD/HM

ACC NR: AP6012284

SOURCE CODE: UR/0125/65/000/011/0063/0067

AUTHOR: Slavin, G. A.; Petrov, A. V.; Korotkova, G. M.; Filippov, M. A.

ORG: none

TITLE: Power source for pulsed DC arc

SOURCE: Avtomaticheskaya svarka, no 11, 1963, pp 63-67

TOPIC TAGS: electric power source, electric arc, arc welding, pulse welding, circuit design

ABSTRACT: The pulsed DC arc welding method is a variation of shielded arc welding with a nonconsumable electrode, which can be used to weld stainless and high-temperature steels with wall thickness of 0.3-2.5 mm. It requires a power source that must assure the required range of the control of pulse time t_p and pause time t_{pa} , the required extent of current regulation, the ionization of the arc gap during the pauses and a definite front of current rise during the pulse. In this connection, the authors determined experimentally the optimal parameters of a power source of this kind by welding specimens of 1Kh18N9T steel 0.4, 0.8, 1.0 and 3.0 mm thick, the criterion used being the melting power of the pulsed arc, characterized by its thermal

Card 1/2

UDC: 621.791.03:621.311.6